

CLAIM AMENDMENTS

Claim 1 (Currently amended): A biosensor comprising:
a substrate, at least a portion being non-embossed,
a reagent positioned on the non-embossed portion of the substrate, and
a cover positioned on the substrate, the cover including a top side and a generally flat non-embossed bottom side, the bottom side being ~~coupled to~~ sealed onto the substrate to define a sealed portion having an interior border and an unsealed portion positioned within the interior border of the sealed portion, at least a portion of the unsealed portion of the generally flat non-embossed bottom side cooperating with the substrate to define a channel positioned between the cover and the substrate, having sides defined by the interior border and extending across the reagent.

Claim 2 (Original): The biosensor of claim 1, wherein the cover includes an opening and the channel extends between the opening and the reagent.

Claim 3 (Original): The biosensor of claim 2, wherein the cover includes opposite ends and the channel extends between the opening and one of the ends.

Claim 4 (Original): The biosensor of claim 2, wherein the cover includes a second opening and the channel extends between the first and second openings.

Claim 5 (Original): The biosensor of claim 4, wherein the cover includes opposite edges and one opening is formed in each of the opposite edges.

Claim 6 (Original): The biosensor of claim 5, wherein each opening is defined by a disrupted concave surface.

Claim 7 (Previously presented): The biosensor of claim 2, wherein the cover includes a second opening that is aligned with the reagent.

Claim 8 (Original): The biosensor of claim 7, wherein the channel converges from the first opening toward the second opening.

Claim 9 (Original): The biosensor of claim 1, further comprising electrodes positioned on the substrate and the channel extends across at least a portion of the electrodes.

Claim 10 (Original): The biosensor of claim 9, wherein the cover includes an opening to the channel that is spaced-apart from the electrodes.

Claim 11 (Original): The biosensor of claim 1, wherein the channel has a height that is less than 10 μm .

Claim 12 (Original): The biosensor of claim 1, further comprising an adhesive positioned between the cover and the substrate.

Claim 13 (Currently amended): A biosensor comprising:
a substrate, at least a portion being non-embossed,
a reagent positioned on the non-embossed portion of the substrate, and
a cover positioned on the substrate, the cover having a top side and a generally flat non-embossed bottom side, and an opening extending between the top and bottom sides, the bottom side being ~~coupled to~~ sealed onto the substrate to define a sealed portion having an interior border and an unsealed portion positioned within the interior border,
at least a portion of the unsealed portion of the generally flat non-embossed bottom side cooperating with the substrate to define a channel positioned between the cover and the substrate, having sides defined by the interior border and extending between the opening and the reagent.

Claim 14 (Original): The biosensor of claim 13, wherein the sealed portion has an interior border that is generally U-shaped.

Claim 15 (Original): The biosensor of claim 14, further comprising electrodes positioned on the substrate and at least a portion of the electrodes are positioned in the channel.

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Claim ¹⁶~~15~~ (Original): The biosensor of claim 13, wherein the sealed portion has an interior border that converges from the opening toward the reagent.

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Claim ¹⁷~~16~~ (Original): The biosensor of claim 13, wherein the cover includes two openings and the channel extends between the openings.

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Claim ¹⁸~~17~~ (Original): The biosensor of claim ¹⁸~~16~~, wherein the cover includes opposite edges and the openings intersect the edges respectively.

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Claim ¹⁹~~18~~ (Original): The biosensor of claim ¹⁷~~16~~, wherein the substrate includes notches that are aligned with the openings in the cover.

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Claim ²⁰~~19~~ (Original): The biosensor of claim ¹⁷~~16~~, wherein the sealed portion has an interior border that converges from the first opening toward the second opening.

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Claim 20²¹ (Currently amended): A method of forming a biosensor having a capillary channel, the method comprising the steps of:

providing a substrate,
positioning a reagent on the substrate,
providing a cover having a top surface and a non-embossed bottom surface,
placing a thermoset adhesive on the bottom surface of the cover,
placing the adhesive-coated bottom surface on the substrate, and
heating portions of the thermoset adhesive to couple the bottom side to the substrate to define a sealed portion having an interior border and an unsealed portion positioned within the interior border, the unsealed portion cooperating with the substrate to define a capillary channel positioned between the cover and the substrate, having sides defined by the interior border and extending across the reagent.

Claim 21²² (Original): The method of claim 20²¹; further comprising the step of placing electrodes on the substrate.

Claim 22²³ (Currently amended): A biosensor comprising:

a substrate,
a reagent positioned on the substrate,
a cover positioned on the substrate, the cover including a top side and a bottom side, the bottom side being coupled to the substrate to define a sealed portion having an interior border and an unsealed portion positioned within the interior border, and
a non-preformed channel positioned between the unsealed portion of the bottom side and the cover and having sides defined by the interior border, the channel extending across the reagent.

Claim 23²⁴ (Previously presented): The biosensor of claim 1, wherein the cover includes an opening and the channel extends between the opening and the reagent.

Claim 24²⁵ (Previously presented): The biosensor of claim 23²⁴, wherein the cover includes opposite ends and the channel extends between the opening and one of the ends.

Claim 25²⁶ (Previously presented): The biosensor of claim 23²⁴, wherein the cover includes a second opening and the channel extends between the first and second openings.

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Claim ²⁷26 (Previously presented): The biosensor of claim ²⁴23, wherein the cover includes a second opening that is aligned with the reagent.

Claim ²⁸27 (Previously presented): The biosensor of claim 26, wherein the channel converges from the first opening toward the second opening.

Claim ²⁹28 (Previously presented): The biosensor of claim ³³22, further comprising electrodes positioned on the substrate and the channel extends across at least a portion of the electrodes.

Claim ³⁰29 (Previously presented): The biosensor of claim 1, wherein the channel has a height that is less than 10 μm .

Claim ³¹30 (Previously presented): The biosensor of claim 1, further comprising an adhesive positioned between the cover and the substrate.

Claim ³²31 (Currently amended): A biosensor comprising:
a substrate,
a reagent positioned on the substrate,
a cover positioned on the substrate, the cover having a top side and a bottom side, and an opening extending between the top and bottom sides, the bottom side being coupled to the substrate to define a sealed portion having an interior border and an unsealed portion positioned within the interior border, and
a non-preformed channel positioned between the unsealed portion of the bottom side and the cover and having sides defined by the interior border, the channel extending between the opening and the reagent.

Claim ³³32 (Previously presented): The biosensor of claim ³²31, wherein the sealed portion has an interior border that is generally U-shaped.

Claim ³⁴33 (Previously presented): The biosensor of claim ³³32, further comprising electrodes positioned on the substrate and at least a portion of the electrodes are positioned in the channel.

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Claim ³⁵34 (Previously presented): The biosensor of claim ³²31, wherein the sealed portion has an interior border that converges from the opening toward the reagent.